

## **Historic, Archive Document**

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"SAVING SOIL WITH SOD"

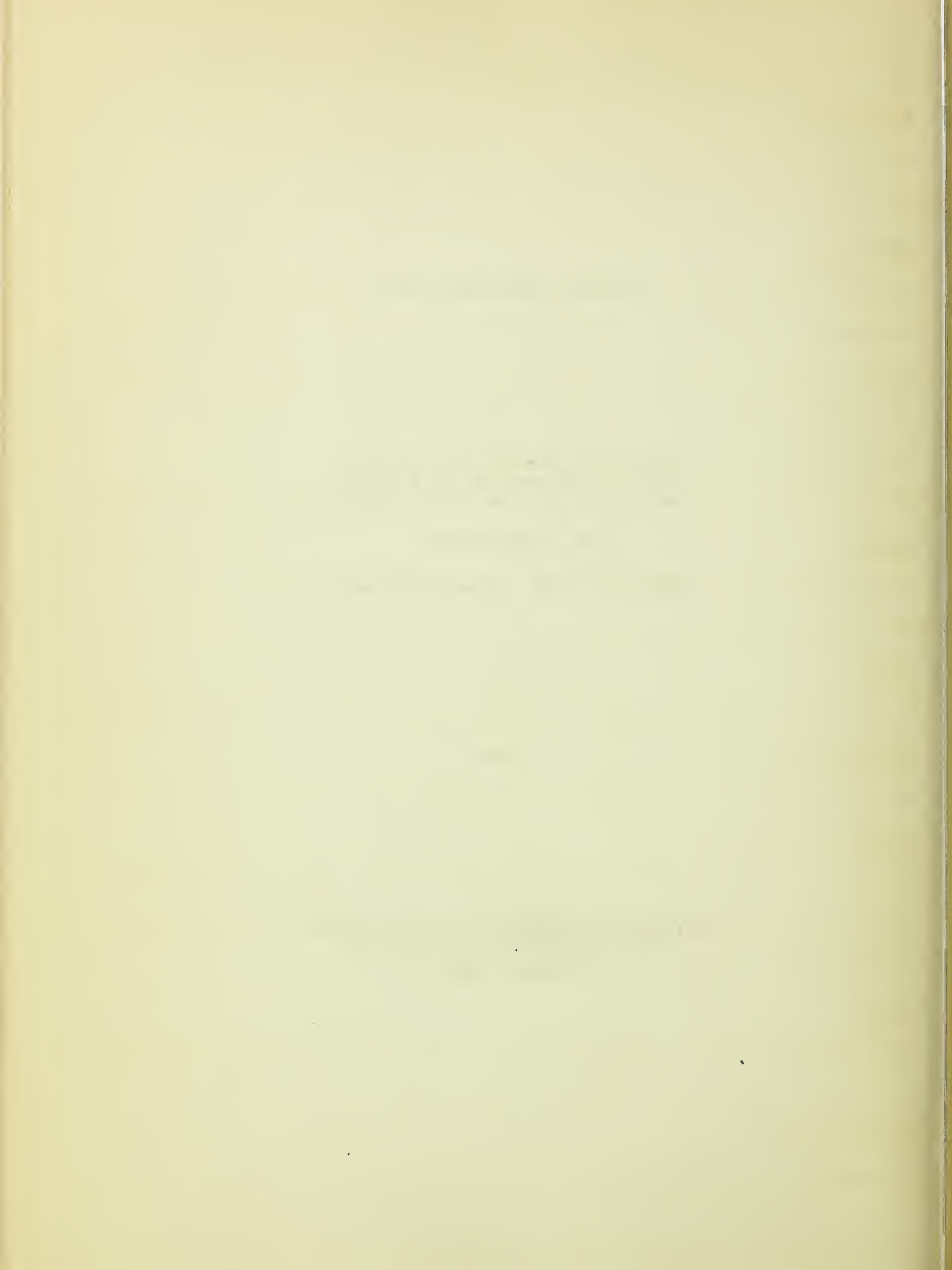
Broadcast No. 11 in a series  
of discussions of soil con-  
servation in the Ohio Valley.

WLW, Cincinnati

July 9, 1938 6 - 6:15 p.m.

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U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE  
Dayton, Ohio



SOUND: Thunder, followed by rain...

ANNOUNCER

Fortunes Washed Away!

MUSIC: Fading...

ANNOUNCER

Pioneers who ventured over the Appalachian Mountains into the headwaters of the Ohio Valley found most of the land covered with heavy timber. Early settlers literally fought their way through the wilderness. A New England family came into Northwest territory in 1830 with a yoke of oxen.

SOUND: Ancient hand-made wagon, chucking along rough, forest trail.

DAVID

Tom, Buck--Hey! (Cracks whip) Ho-o-o, Buck, Ho-o-o.

SOUND: Wagon comes to stop.

RUTH

Let's don't go on. Let's stop. We can settle here near Marietta.

LITTLE GIRL

Yes, papa--let's stop, 'cause I'm tired.

DAVID (pensively)

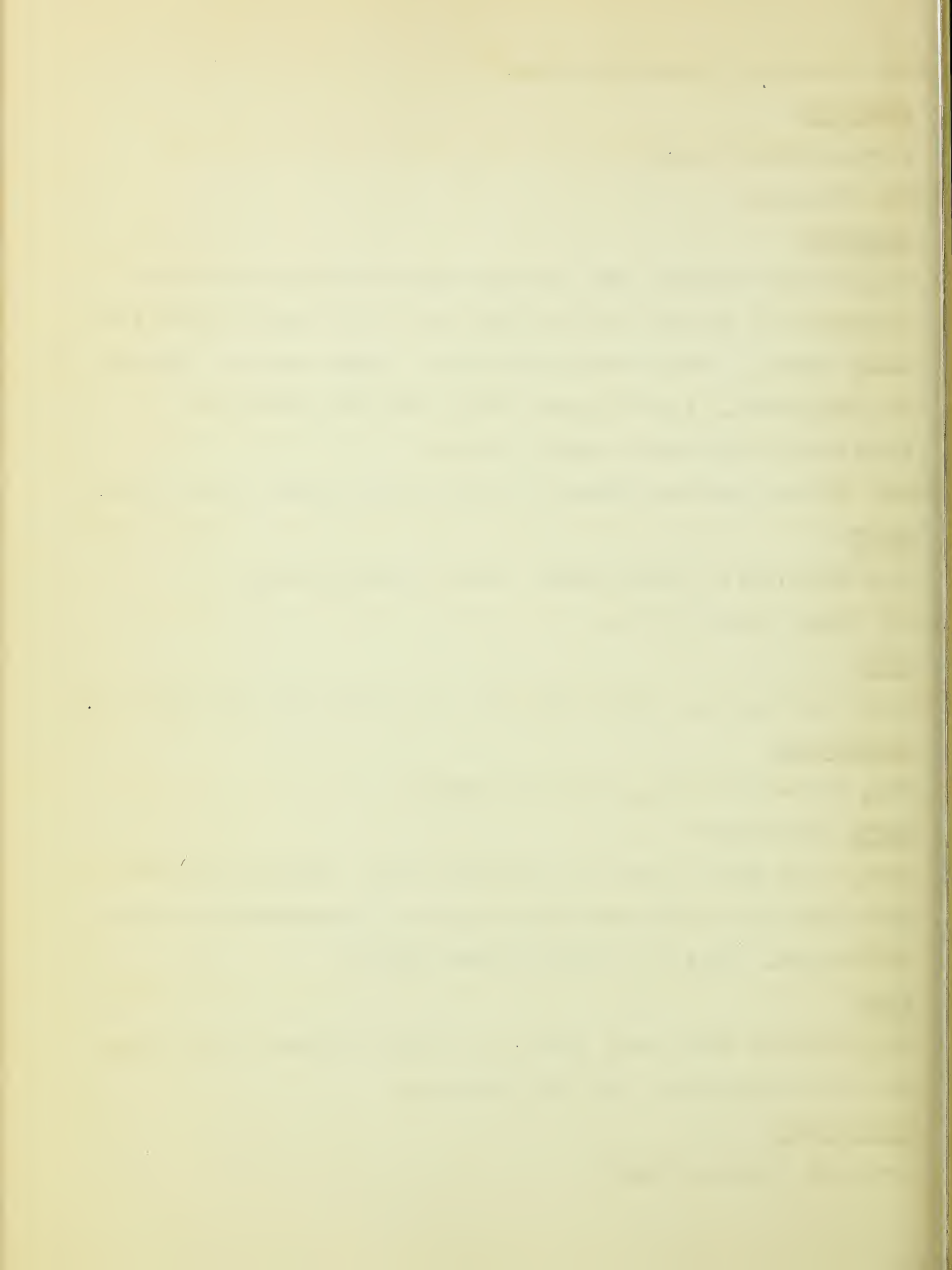
Well, I did want to get up to Rainbow Creek. They say there's good land there--but mebbe this is just as good--we'll be close to Marietta. This is a pretty little valley.

RUTH

Yes, David--I like this. And I'm so tired of going on and on... into this wilderness. And the Indians...

LITTLE GIRL

O-o-o-h! Indians, Mamma?



RUTH

Hush, Priscilla! No...no Indians. Mamma was just playing.

DAVID

Ah, Ruth...this is fine country. Just look at that soil under the trees...looks soft and mellow. Bet that will grow wheat and corn--eh, Buck, old boy? Wait 'till we get our plow into it!

RUTH

David, this is such wild country--it scares me a little. But when you talk that way it makes me glad we left Connecticut.

DAVID

Yeah. This is the country. Free land, rich land. Ho-o-o, Buck! Lemme get that yoke off'n, yuh--(sound: clinking of chains and dropping yoke to ground). There now, boys--fill your bellies with that fine grass.

MUSIC: (Some familiar pioneer tune)

ANNOUNCER

And so they settled near Marietta. Other land-hungry pilgrims came over the mountains--became their neighbors. Come spring again, David and Ruth stood by the log cabin as twilight descended upon their clearing in the valley.

RUTH

I guess you're tired tonight, David, after plowing in the stump field all day.







DAVID

Oh, not so tired. O' course, plowin' the stump land isn't like breakin' the meadow--have to fight the roots and stumps all the time. But the soil--ah, Ruth, it makes up for all the hard work and the long winter. It's mellow and loamy. Look at the wheat there. It'll be headin' out soon.

RUTH

My, it's not like it was in Connecticut...

DAVID (interrupting--rather contemptuously of Connecticut)

I should say not! Why, back home on father's place the soil is hard and rocky--won't grow anything. Father says it used to be good land but the rains washed it away.

RUTH

Maybe rain will wash this, too.

DAVID

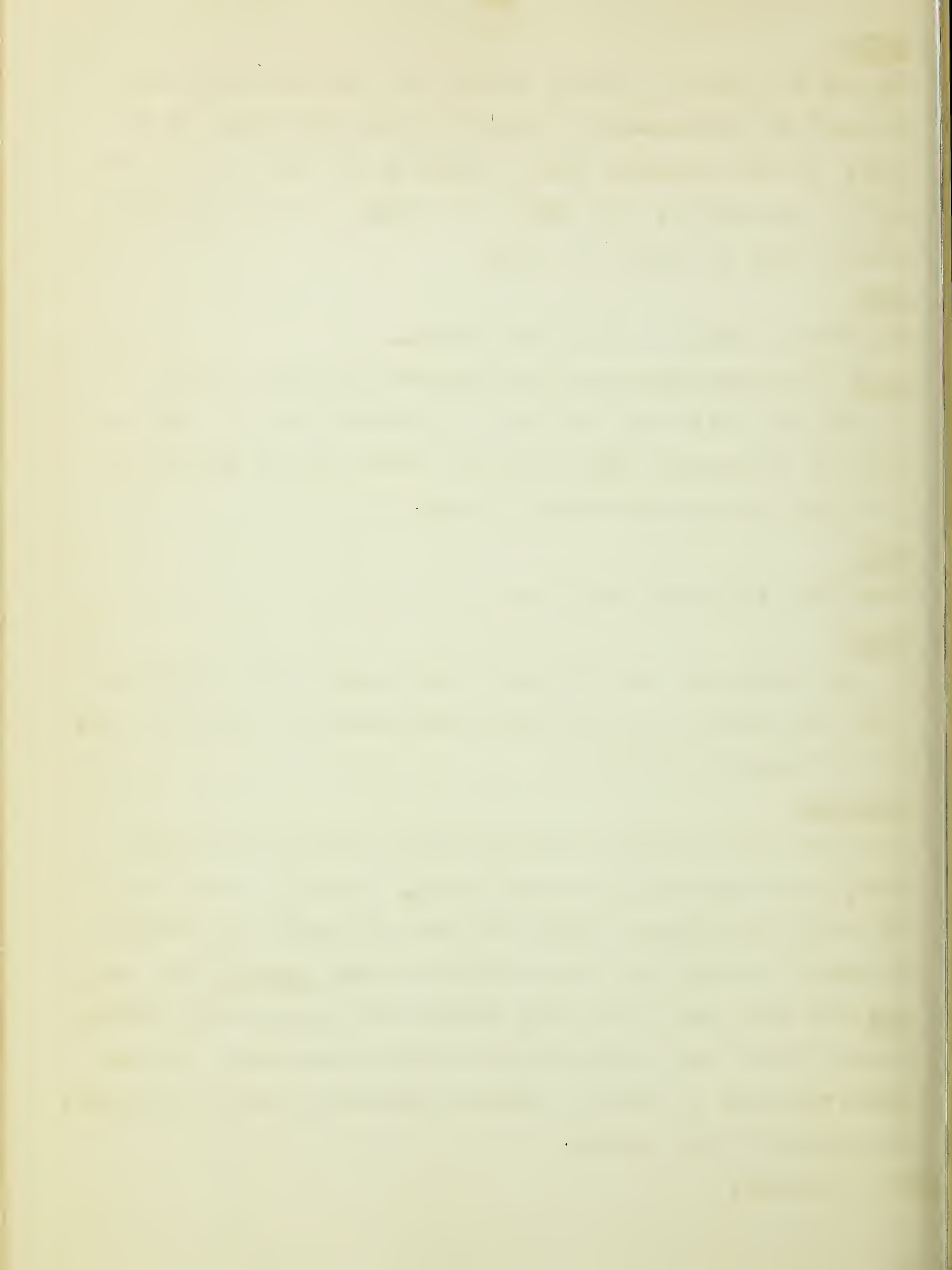
No, no. Nonsense. Why, this soil won't wash. It'll never wear out. Next winter I'll clear that little corner o' woods for corn.

MUSIC: (A song of harvest)

ANNOUNCER

And David did clear more land that winter and the next and the next. And neighboring settlers cleared. Cut the forests from the hills and valleys. Plowed the land and farmed it. Farmed it hard. The soil that early settlers thought couldn't wear out, has worn out. Many of the lush meadows have disappeared. Today, western states ship alfalfa hay into the northern dairy states--where thousands of acres of formerly productive land lie abandoned, the result of soil erosion.

MUSIC: Fading...



ANNOUNCER

But, fortunately, thousands of farmers are doing something to rebuild pastures on eroded, worn-out land. To learn just how, let's turn once more to the Soil Conservation Service. Here's Gene Charles of the Dayton, Ohio, office. Gene, what can you say about saving soil with grass?

CHARLES

Fortunately, \_\_\_\_\_, I don't have to say much, because these two men here know much more about meadows and pastures than I do. This is Everett Reed, of the Ohio Agricultural Extension Service and this is Kenneth Welton of the Soil Conservation Service.

ANNOUNCER

Well, we're glad to have you gentlemen on this program--especially so if you know all about grass.

CHARLES

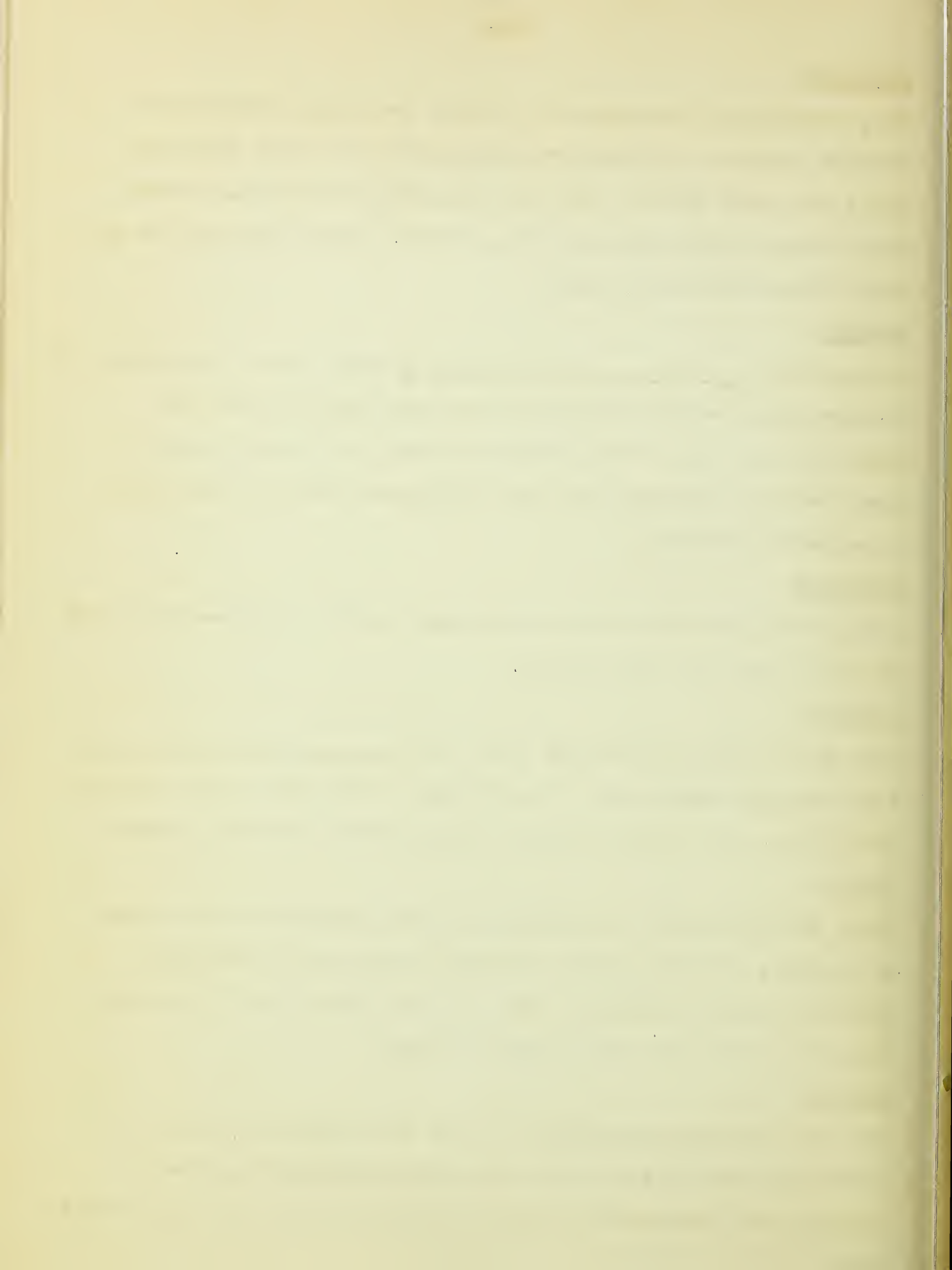
They don't claim to know all about it, \_\_\_\_\_, but they can answer a lot of questions. And, just to get started, Mr. Welton, what is the biggest single pasture problem, today?

WELTON

Gene, the problems vary somewhat from one section of the country to another. But if you are speaking of the Ohio Valley and adjacent areas, I would say that lack of plant food is probably the chief reason for poor pastures today.

CHARLES

You mean constant harvesting of crops and continued grazing have robbed the soil of such vital elements as phosphorus, lime, nitrogen, and potash--the elements that make grass and the clovers grow?





WELTON

Yes, that's it. But don't forget soil erosion. Erosion takes the fertile topsoil first and when you lose that you not only lose plant food but also the best medium in which to grow plants--a fertile loamy soil, high in organic matter. As for overgrazing, we hear a lot about it, but, personally, I'm inclined to think that if starvation through lack of plant food is cared for, the overgrazing will not be a difficult problem to solve. I don't know whether Mr. Reed would agree with me on that or not.

REED

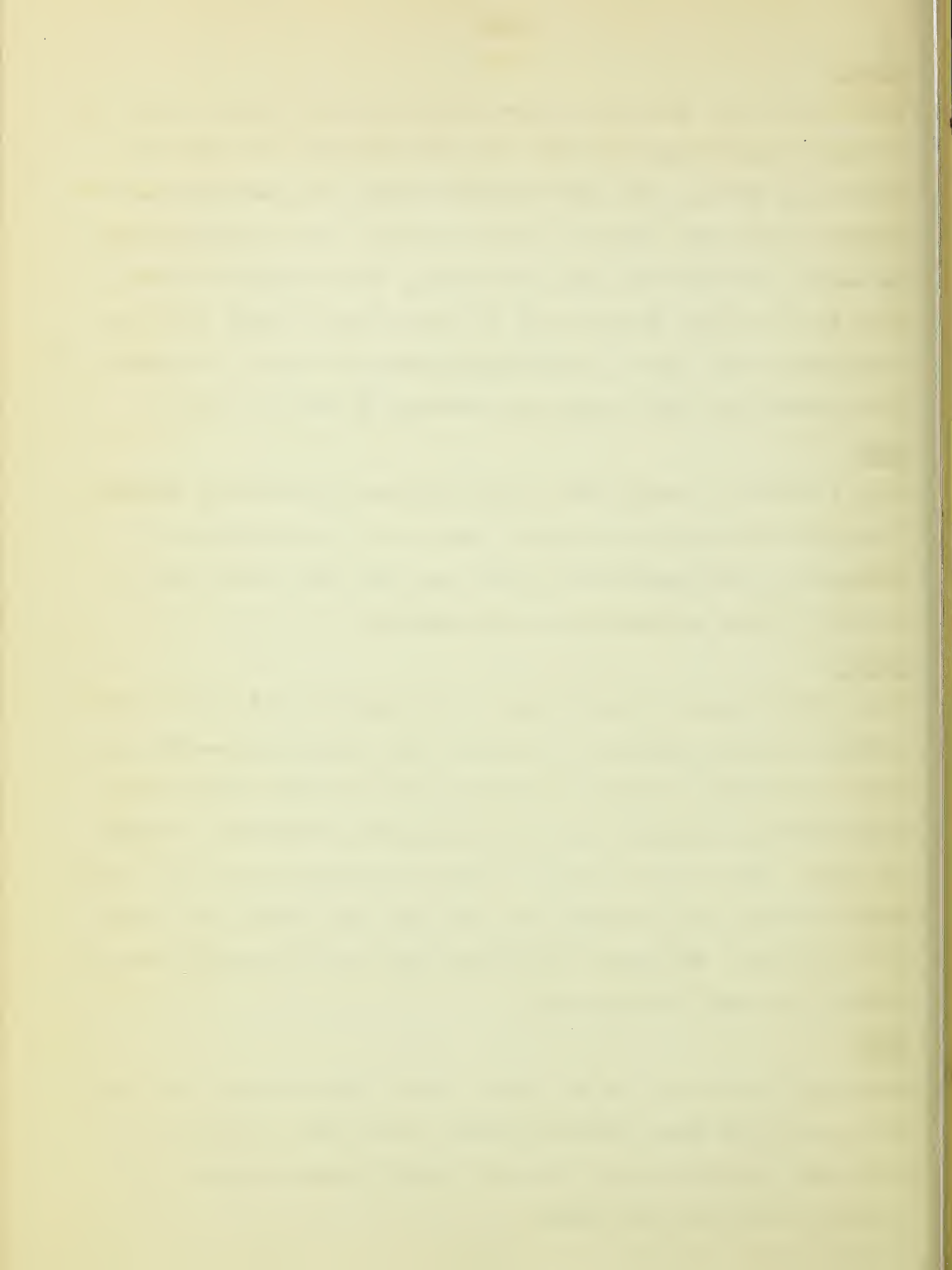
Yes, I believe I would, Ken. Under ordinary conditions, anyway. I believe we've got to recognize that it is a combination of overgrazing and insufficient plant food that has turned many of our Ohio Valley pastures into weed patches.

WELTON

Well, that's partly because some of our farmers don't give their pasture as much attention as they do other crop fields--just dig into the history of what happened and this is what you'll find. Early settlers cleared the land and cropped it hard for a number of years. When the soil began to wash and didn't grow grain crops quite so well, they cleared more new land and let the old fields go to pasture. The grass and clovers came in and healed over the gullies and made fine pasture.

REED

That is, it did that for the first two or three times. But when the process had been repeated several times over a period of fifty to a hundred years, the soil finally became so poor it wouldn't even grow good grass.



WELTON

Exactly, and that's right where we are today. We're trying to grow our pasture on the poorest land without any fertility treatment. We have pushed the pastures up onto the steepest slopes. And in most cases we haven't reduced the number of livestock, although the grass acreage per farm has been reduced. At the same time, the productiveness of the land itself has been going down. So today we have millions of acres that are classed as pasture--but are actually nothing more than impoverished gullied lands. Good grass just won't grow on such land without treatment and management.

REED

And the truth of the matter is that a lot of farmers burn over such lands each year--hoping, I suppose, to get rid of the weeds and brush, so that grass will grow. But burning really only makes matters worse. It destroys organic matter and the soil has already lost most of that important material. To make matters worse, burning leaves the land bare and unprotected against soil erosion.

CHARLES

Now, Everett, suppose you tell us what can be done to get some grass growing on worn-out pastures? Then Welton can take up the erosion problem.





REED

Well, as you know, Gene, if you can grow a good grass and clover pasture, you'll come pretty close to solving the erosion problem. But, in general, the poor pastures in this section are poor because the soil hasn't enough lime and phosphorus. It's almost useless trying to establish a grass-legume sod, either for pasture or hay, until you've restored the lime and phosphorus. That's why we say the first step in establishing grass is to test the soil. Any county agricultural agent will analyze soil samples for the farmer or show him how to do it.

CHARLES

And the test will show how much ground limestone should be applied to sweeten the soil?

REED

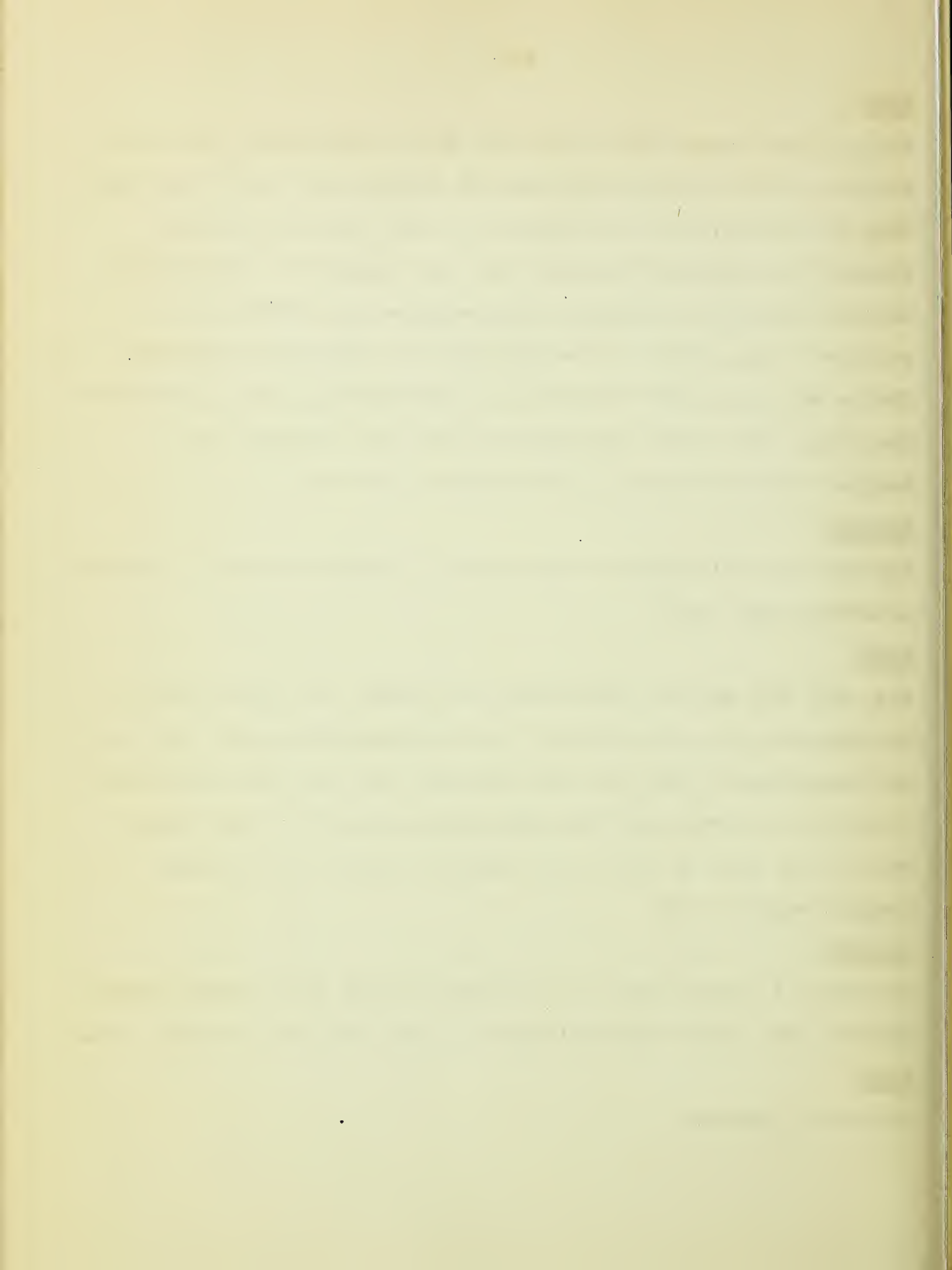
Yes, and show whether phosphates are needed. If these elements are present, you can establish the legumes--alfalfa, the clovers, and lespedezas. They will put nitrogen into the soil and promote a good root growth, and that adds organic matter to the soil. Most of the soil on these poor pastures doesn't have enough organic matter in it.

CHARLES

Everett, it seems to me you are simply saying that pasture plants must be fed. That they won't grow on soil that has no plant food.

REED

That's it, exactly.



CHARLES

All right, now that we've agreed on that point, let's turn to the erosion problem. You ready on that, Welton?

WELTON

Sure, I'm always ready to talk erosion control. Mr. Reed said there won't be much soil lost through erosion if there is a good sod on the land. All the experiments have proven that beyond any doubt. Even on the steeper land, a good grass cover will prevent erosion. Sometimes, during heavy or long continued rains, considerable water runs off sod-covered land, but the grass slows the run-off down to a point where it hasn't enough velocity or force to carry much soil with it.

CHARLES

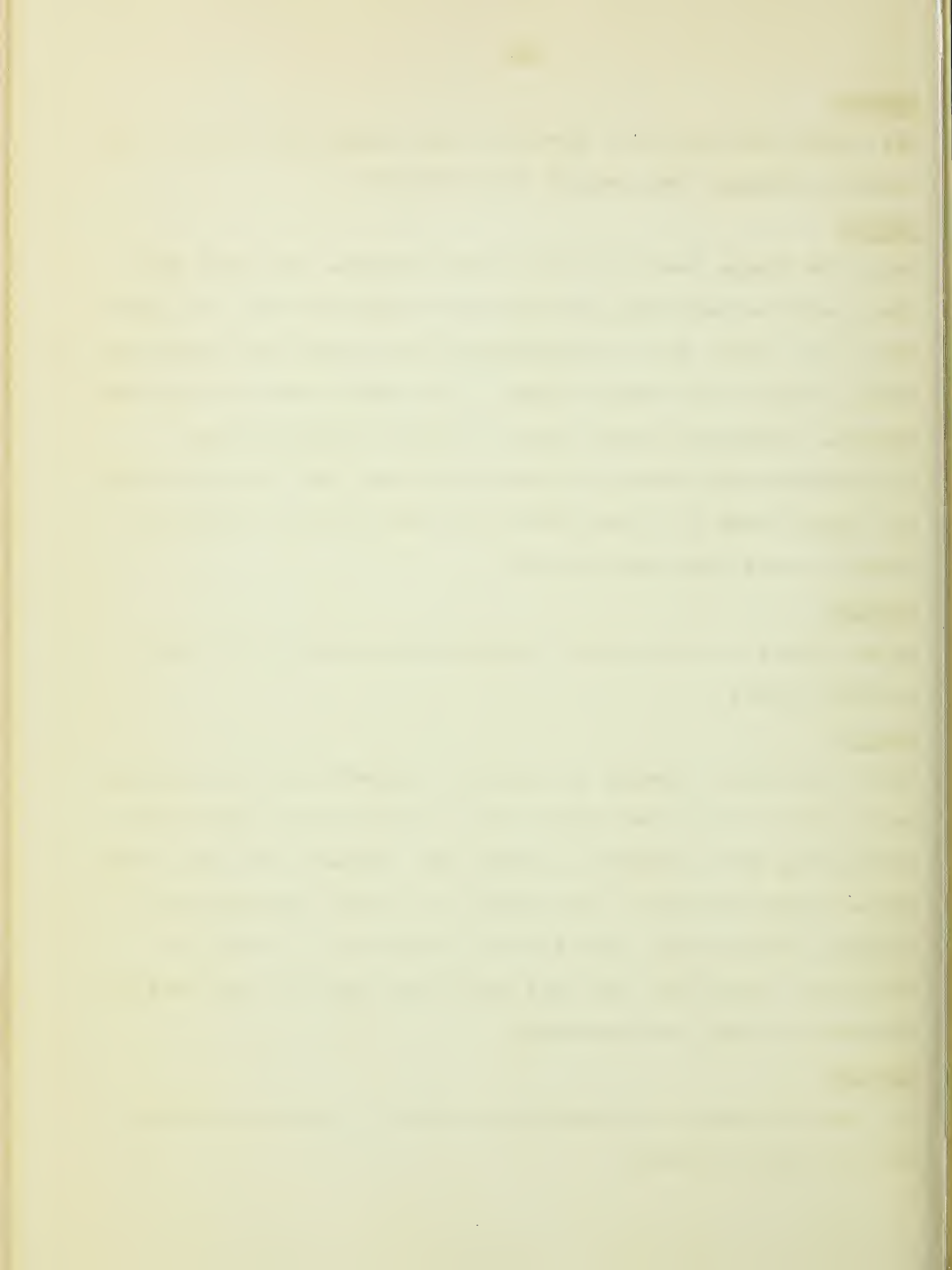
So the idea is to use grass or grass-legume mixtures at every possible place.

WELTON

That's the idea. Usually we leave the steepest land in pasture, but we try to get a good thick cover on it by using exactly the methods Mr. Reed described a moment ago. Farmers are also using grass-legume seedings in the meadows of contour strip-cropped fields. If necessary, they lime and fertilize the strip to establish a good sod. And this year, more and more Ohio Valley farmers are using sod waterways.

CHARLES

You mean the natural depressions or draws in cultivated fields that are left in grass?





WELTON

Yes, and the grass is kept in wide strips, so that a hay crop can be cut. Now, another place where grass is used effectively is in terrace outlets. Terraces often concentrate a lot of water that must be disposed of carefully if gullying is to be prevented. And experience has shown us that wide sod outlets will usually handle this water safely and inexpensively. If the outlet is wide and level, the farmer can use it as hay land.

CHARLES

I know that grass is also valuable in gully control. Suppose you tell us a little about this work.

WELTON

We're using grass more and more for gully control. If run-off water from above a gully can be kept out of it, the gully can often be revegetated with grass and legumes alone. But sometimes it is necessary to install temporary check dams--to help the grass get started. There are many other ways that grass is used in soil conservation--fruit growers use it in orchards. Farmers and highway engineers plant rank-growing beachgrass to hold sand dunes, and so on.

CHARLES

Well, Ken, there's one other point--that's the use of grasses and clovers for winter cover. One of our listeners asked me about it. Suppose we let Reed discuss that.





All right. Some of the small grains and grasses make excellent winter cover for cropland. Ryegrass, orchard grass, and redtop are good in sections where adapted. Vetch is, too, and crimson clover is fine a little further south. A lot of farmers are planting these winter cover crops in the fall. Then they can be used for early spring grazing--and that helps keep stock off the permanent pasture until it gets nicely started. And here's another point. Just before planting time, plow the cover crops under for green manure. They take up nitrogen and other fertility elements from the soil and prevent loss by leaching. I'm convinced farmers are going to use winter cover crops more and more.

CHARLES

I'm glad to hear you say that, Everett, and I hope they keep on plowing under some of those grasses and legumes to build up the soil. And I want to thank you gentlemen for coming up and helping us. Now, \_\_\_\_\_, if our listeners want more information on the use of grass, we'll be glad to send it to them.

ANNOUNCER

If you would like to receive bulletins telling about grass and its use in erosion control, write to Soil Conservation, Dayton, Ohio. Ask for "grass in erosion control."

SOUND: Thunder, followed by rain, fading...

ANNOUNCER

Next week, "A Typical Conservation-Conditioned Farm."

MUSIC: Fading...

ANNOUNCER

This is an educational presentation of the Nation's Station.

